

Zimmermann (6.)

al

ON VACCINE BLEPHARITIS

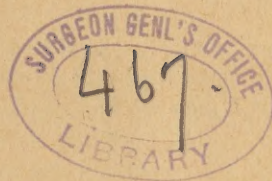
BY

CHARLES ZIMMERMANN, M.D.

AURAL AND OPHTHALMIC SURGEON TO ST. MARY'S AND EMERGENCY HOSPITALS,
MILWAUKEE, WIS.



Reprinted from the ARCHIVES OF OPHTHALMOLOGY, Vol. xxi., No. 2, 1892



ON VACCINE BLEPHARITIS.

By CHARLES ZIMMERMANN, M.D.,

AURAL AND OPHTHALMIC SURGEON TO ST. MARY'S AND EMERGENCY HOSPITALS,
MILWAUKEE, WIS.

ONLY a few cases of vaccine blepharitis (vaccine-ophthalmia, vaccinia of the eyelids, vaccine, vaccinula on the border of the eyelids) with subsequent affections of the eyes are published by Hirschberg,¹ ² Senat,³ Hervieux,⁴ Berry,⁵ Schapringer,⁶ J. T. James,⁷ Peiper,⁸ Schirmer,⁹ so that a further contribution will not be superfluous.

H. P., a boy twelve years old, was brought to my office by his father, October 31, 1891, on account of an inflammation of his right eye. The right lower lid showed two ulcerating patches at the ciliary margin, close to the external canthus. Both lids were slightly oedematous. These patches bearing a great resemblance to vaccine pustules in the ulcerating stage, I at once asked the father whether the boy had been recently vaccinated, which, however, had not been the case, and neither of them knew that he had come into contact with anybody who had been vaccinated. I gave him hydrarg. oxydat. flav. ointment, and ordered cold applications. The next day the father came alone, stating that the eye of his son had become very much inflamed, so that he could not see out of it, and that the left eye was commencing to get sore. At his residence I found the following condition: The right upper lid is red, intensely swollen, overhanging the lower one, and cannot be raised voluntarily; it feels hard to the touch, which causes pain. It cannot be everted, but lifted with the finger it shows the conjunctiva infiltrated by a gray membranous exudation, which cannot be wiped away. Thin yellow fluid is discharged. The ocular conjunctiva is in a state of in-

tense chemosis, but not coated. The cornea is perfectly clear. The conjunctiva of the lower lid exhibits the same appearance as the upper one, and the ulcers at the ciliary margin are likewise covered by a grayish-yellow material. The left eye shows slight œdema of lids and some mucous discharge, but is open, although the palpebral fissure has become smaller. The right preauricular and submaxillary glands are considerably swollen and tender. Both tonsils are inflamed and very much enlarged, but without pseudo-membranes. Swallowing is painful, and he has fever and general prostration. Upon renewed inquiry as to the etiology of the two ulcers, I learned that the younger sister of the patient, who was occupying the same bed with him, had been vaccinated in school a few days previously on her left arm, which presented a pretty large ulcer covered by a scab. Both eyes were treated with cold applications day and night (the pieces of linen used for each eye being kept on separate blocks of ice in separate dishes) and irrigated and washed with chlorine water. The swelling disappeared gradually, so that on November 4th a better aspect of the grayish infiltrated conjunctiva could be obtained. The chemosis was still very large, projecting as a thick red wall around the cornea. The latter remained entirely clear. On November 7th he could open the right eye, which was discharging more freely now. The inflammation of the left eye had been arrested from the first day. On November 12th the patient could come to my office, where the conjunctiva was found to be free from membranous deposit, but, being still red and velvety, was treated with a 3 % solution of nitrate of silver. The condition improved steadily, so that on December 16th nothing of the disease was left but a slight redness of the ciliary borders, and a moderate ptosis of the right upper lid, which, however, did not cause any annoyance. No scars and no change in the position of the lids or cilia. Cornea perfectly clear. $V = 1$.

Although the boy and his parents were not aware of the manner in which the inoculation of the vaccine virus was effected, it was undoubtedly caused by an accidental transmission from the vaccinated arm of his sister. In one of Berry's^s cases a direct transference of lymph took place, owing to the child's arm being often in contact with its mother's face; in another the handkerchief used for wiping the vaccinated arm was admittedly used by the mother also.

Cook's¹¹ patient had most likely infected himself, not from the baby directly, but from a towel that had been used in drying it. Darling¹⁰ observed vaccine vesicles on the eyebrow of a farm-servant, who was in the habit of milking cows, and very likely got it from them, although she could not remember if any of the cows had sores on the teats. Senat⁸ saw a military surgeon who had a vaccine pustule at the left lower lid, with corneal ulcers, caused by lymph squirting into his eye from the pocks of a young cow, while he was vaccinating soldiers.

To decide the question whether there was any lesion of the ciliary margin or not for the introduction of the virus was not possible in this case, as it will hardly be in others, unless it presented itself very conspicuously. And then it will become rather unimportant, if further experimental investigations will prove that even a general infection from the intact conjunctiva may follow, as Braunschweig¹² found it with Ribbert's bacillus of intestinal diphtheria in the conjunctiva of rabbits. (He was unsuccessful, however, with staphylococcus pyog. aur., anthrax, septicæmia of mice, chicken cholera, and tetragenesis.) Most frequently the vaccine vesicle developed on the border of the lower lid, causing a consecutive ulcer on the corresponding portion of the upper lid by direct contact. In our case (and one of Schapringer⁶ and Berry), it was confined to the lower lid. The affection of the conjunctiva, starting from the two ulcers, had the aspect of diphtheritic conjunctivitis. Although observed by others and not taken for diphtheritic, our case appears different, on account of the considerable swelling of the preauricular and submaxillary glands and tonsils, the constitutional symptoms, as fever and general prostration, and in the propagation to the second eye. If a so far healthy conjunctiva may become the seat of a diphtheritic inflammation, why should not the same occur in an eye predisposed by ulcers at the ciliary margin, no matter of whatever origin? Plastic inflammation, with an exudation in the substance of the conjunctiva, was present, and this is the chief local symptom in simple plastic, pseudo-diphtheric, croupous, and diphtheritic conjunctivitis, which

are various grades of the same pathological condition, differing from each other only in intensity.

The *diagnosis* is, of course, easiest when the vaccinia is observed in the first stage, exhibiting the typical vesicles pitted in the centre. Most cases, however, presented the ulcerating pustules, as in ours, having such a characteristic appearance that they are readily recognized. In later stages, however, the diagnosis may become very difficult. Syphilitic ulcers, which have a different appearance, cause also such hard infiltration of the lids, but they require a time of incubation not less than at least twelve days,⁴ and, as well as a tubercular affection, run quite a different course. As the only complication on the eyeball itself, inflammations of the cornea have been noticed in seven cases of vaccine belpharitis by Hirschberg, Senat, Schapringer, Schirmer. Schirmer⁹ once observed a superficial marginal infiltration, twice a very tedious keratitis profunda with peculiar ring formation. Leber¹⁰ mentioned that Critchett saw a purulent affection of the cornea from an injury of the latter by a lymph-lancet. There are some other reports on affections of the eyes in vaccinia, in which the latter were only secondarily suffering from vaccine pustules situated not on the lids themselves, but on neighboring parts, as on the eyebrow and cheek (Darling¹⁰), on the malar eminence $\frac{1}{3}$ of an inch from the external angle of the eye, with huge œdema of the eyelids completely closing the eye, the glands being very much enlarged and tender (Cook¹¹), and an indurated ulcer at the angle of the eye (Hervieux⁴). The preponderance of females and adults, pointed out by Berry and Schapringer, finds, I think, a natural explanation in the fact that these are more exposed to contagion, being chiefly engaged in nursing and handling children, from whom, in most instances, the infection took its origin. Although most cases recovered perfectly, their occurrence might be avoided altogether, if the source of infection, the vaccinated place of the body, were protected by proper dressing, the enforcement of which is the duty of every physician who performs vaccination.

LITERATURE.

1. HIRSCHBERG, these ARCHIVES, 1879, viii., p. 371.
2. HIRSCHBERG, *Centralblatt f. p. Augenh.*, 1885, p. 235, and these ARCHIVES, 1886, xv., p. 115.
- HIRSCHBERG, *Centralblatt f. p. Augenh.*, 1892, p. 17.
3. SENAT: "Vesico-pustule de la paupière inférieure gauche et kératite ulcéreuse, suite d'inoculation accidentelle du vaccine."—*Arch. de méd. mil.*, 1885, October. *Centralblatt f. p. Augenh.*, 1886, p. 59, quoted from *Recueil d'ophthalmologie*, 1886, January.
4. HERVIEUX, Vaccine ulcéreuse (*Bull. de l'acad. de méd.*, 1889, No. 37 ; *C. Bl. fur klin. Med.*, 1890, No. 12, p. 217).
5. BERRY, *Brit. Med. Jrl.*, 1890, p. 1483.
6. SCHAPRINGER, *New Yorker med. Monatsch.*, Nov., 1890 and 1891.
7. JAMES, J. T., *Transact. of the Ophth. Soc.*, 1890-1891, xi., p. 29.
8. PEIPER, *C. B. f. klin. Med.*, 1891, p. 697.
9. SCHIRMER (*Sitz. der oph. Gesellsch. in Heidelberg*, 1891. *C. B. f. pr. Augenh.*, 1892, p. 18, and *Deutsche med. W.*, 1891, p. 1139) observed in all seven cases "diphtheroid" ulcers of the intermarginal portion of the lids, which had developed from small superficial pustules, causing violent inflammatory symptoms, chemosis and œdema of lids. In the discussion Weiss, E. Meyer, Schweigger, Vossius, related similar cases of mild character.
10. DARLING, *Brit. Med. Jrl.*, 1890, p. 1362.
11. COOK, *Brit. Med. Jrl.*, 1891, p. 284.
12. LEBER, the same as 9.
13. BRAUNSCHWEIG, *Fortschr. d. Med.*, vii., p. 921-928 ; *Centralbl. f. Chir.*, 1890, p. 372.

433 Milwaukee St.,
Milwaukee, Wis.

The Knickerbocker Press
G. P. PUTNAM'S SONS
NEW YORK